

Please amend the claims as follows:

*Sub E1*

Claim 13. (Amended) A method for treating a patient having an osteoclast related bone disorder comprising administering an effective an osteoclast related bone disorder treating amount of interferon  $\beta$  or an interferon inducer to [a patient suffering from said bone disorder;] reinstate bone volume of the patient; wherein the bone disorder results from a disturbance between the relative balance of bone resorption and bone formation, and

wherein the bone disorder is not rheumatoid arthritis;

wherein when the interferon inducer is interferon  $\gamma$ , the bone disorder is not Paget's disease, osteoporosis, or osteopetrosis;

and

*81*

wherein when said osteoclast related bone disorder is tumor-related, the tumor-related bone disorder is selected from the group consisting of multiple myeloma, bone metastasis from mammary carcinoma, lung cancer, prostate cancer, thyroid gland carcinoma, renal cancer, colon cancer, cancer of the digestive tract, and cancer of the esophagus.

Claim 14. (Amended) The method for treating a patient having an osteoclast related bone disorder according to claim 13, wherein

the osteoclast related bone disorder is selected from the group consisting of Paget's disease, rickets, osteoporosis, metabolic disorder, bone fracture, osteomalacia, osteopetrosis, osteoarthritis, osteogenesis imperfecta, diseases related to hormonal disorders, autoimmune disorders and periodontal diseases.

Claim 15. (Amended) The method for treating a patient having an osteoclast related bone disorder according to claim 14, wherein the hormonal disorder is selected from Cushing's syndrome and hyperparathyroidism, [and wherein the autoimmune disorder is rheumatoid arthritis,] and wherein the periodontal disease is alveolar bone disorder.

[Please add the following new claims:]

Claim 16 A method for treating a patient having a bone disorder comprising administering an effective bone disorder treating amount of interferon  $\beta$  to reinstate bone volume of the patient, wherein the bone disorder is osteoporosis, and wherein the effective bone disorder treating amount is 10,000 to 10,000,000 units per day.